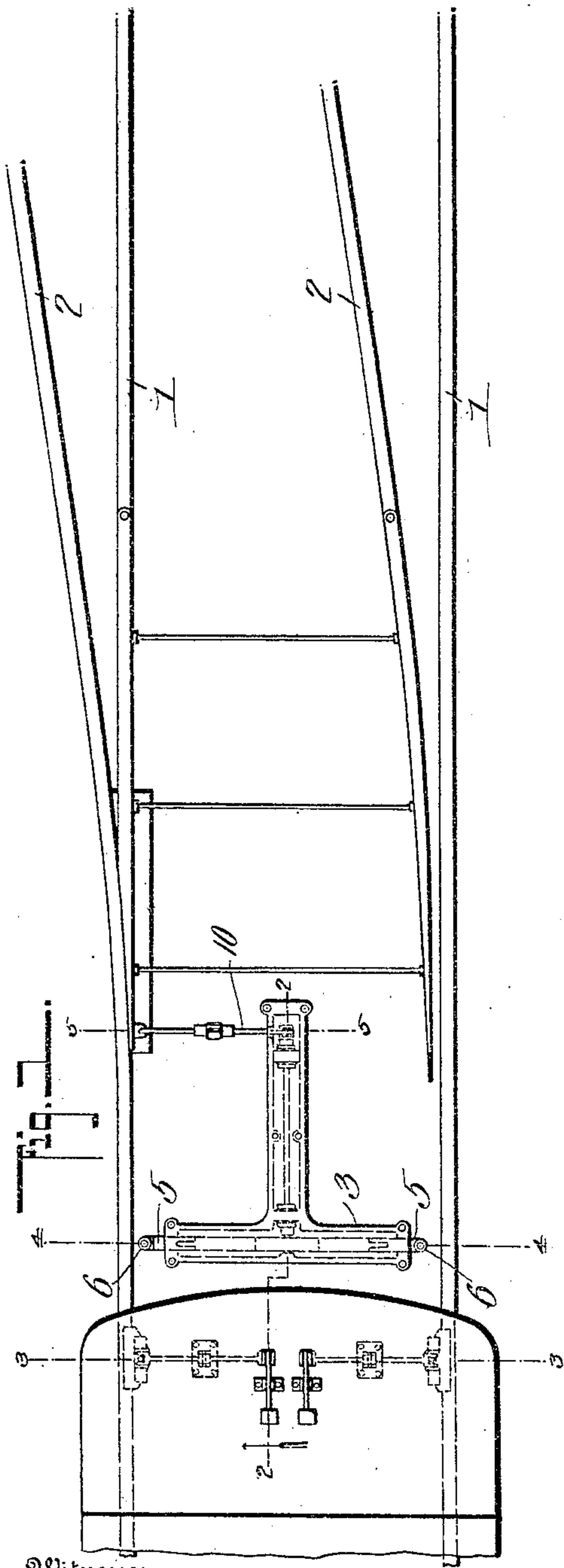


A. L. HUBER.
 SWITCH OPERATING DEVICE.
 APPLICATION FILED FEB. 28, 1908.

911,988.

Patented Feb. 9, 1909.

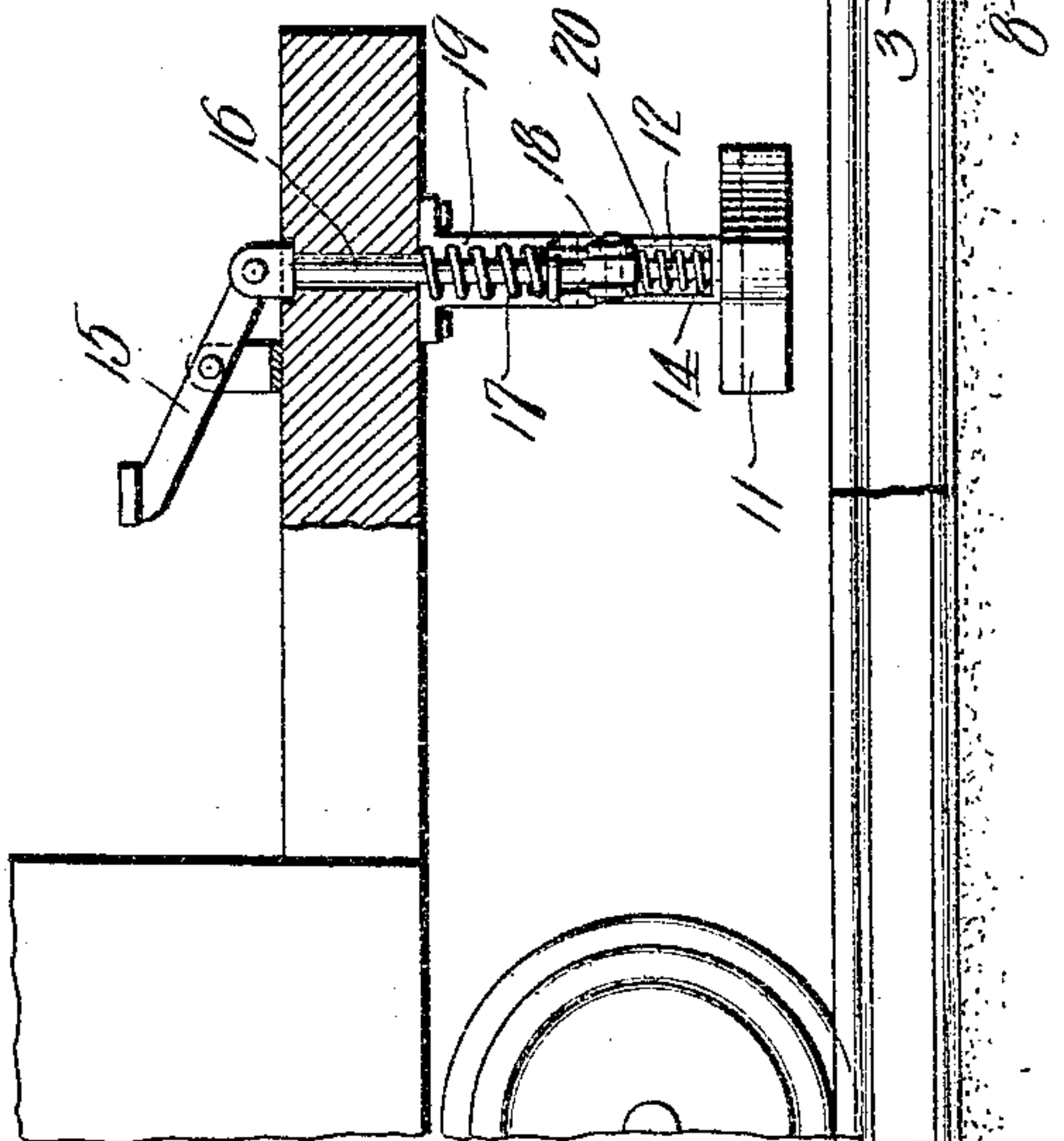
2 SHEETS—SHEET 1.



Witnesses

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Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

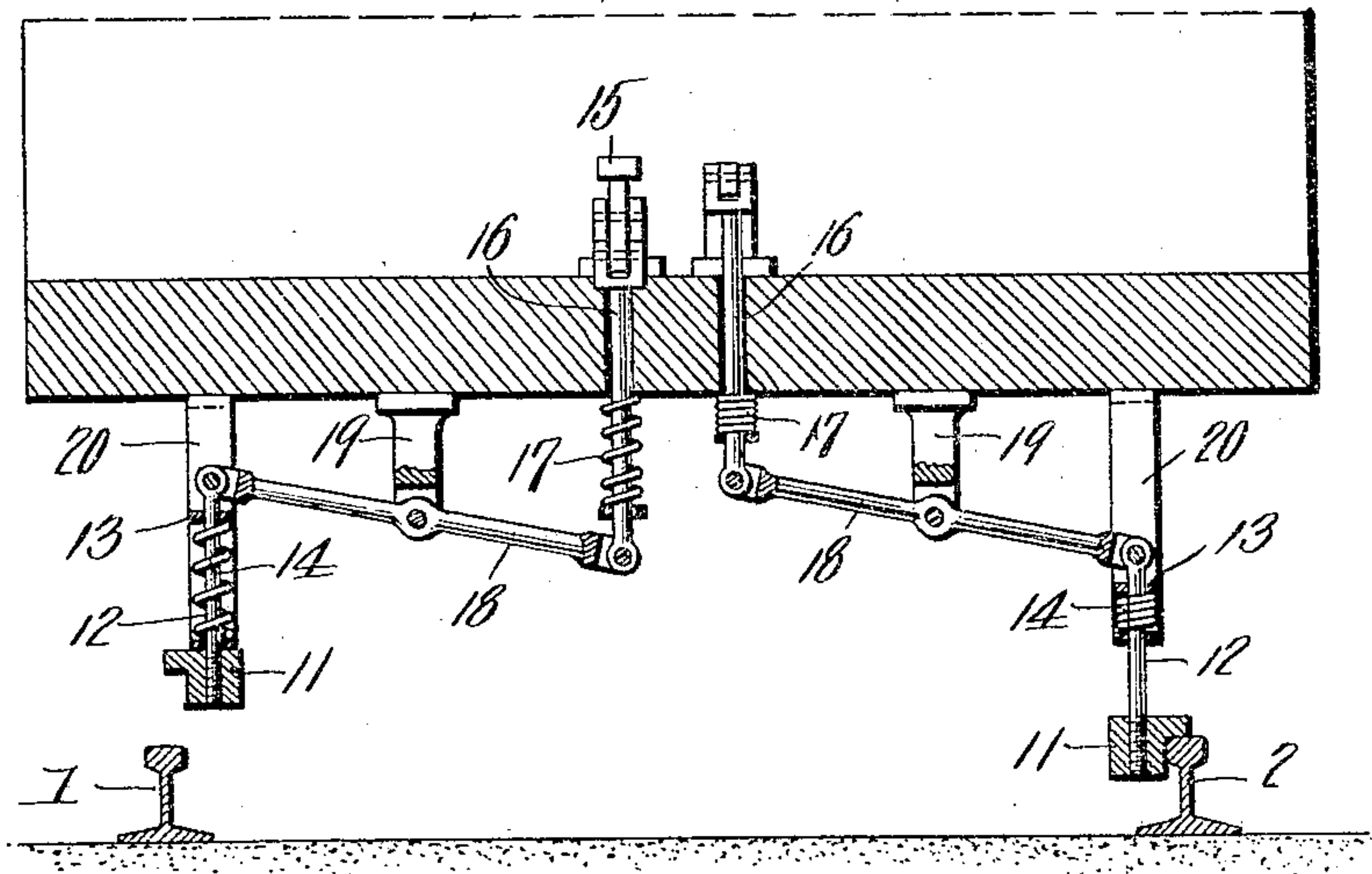


Fig. 4.

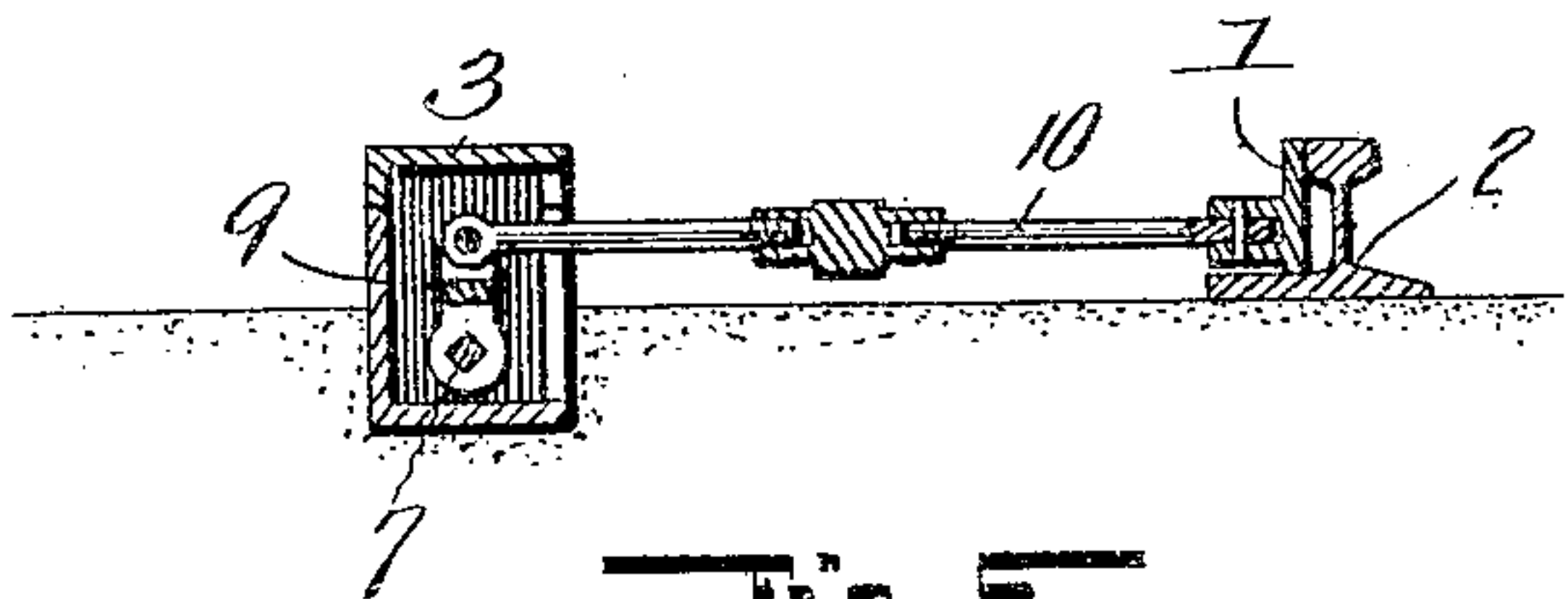
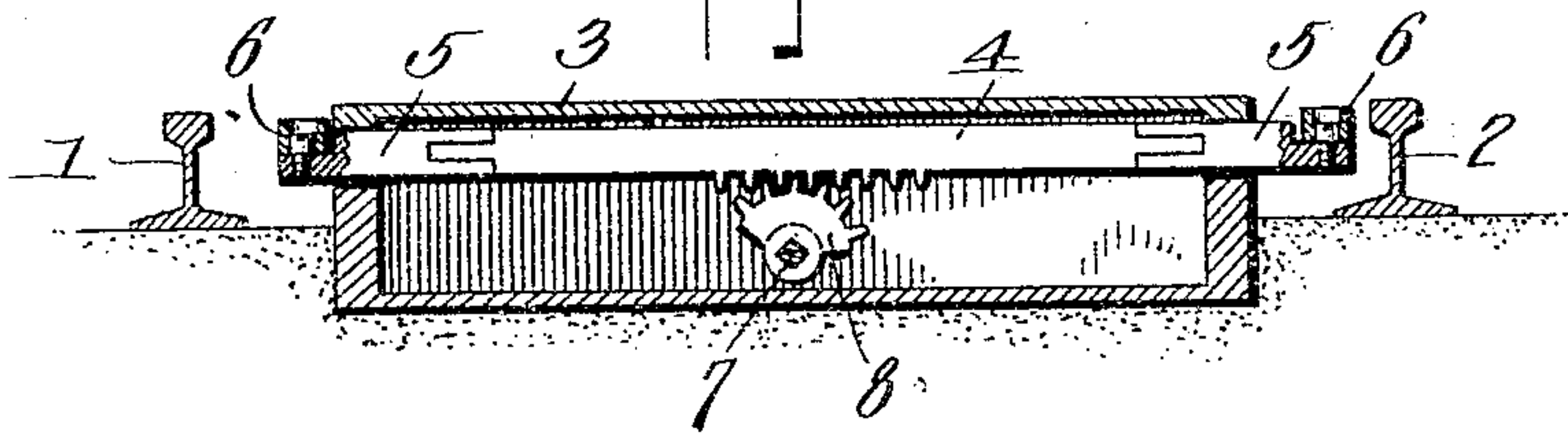


Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

ALBERT LEWIS HUBER, OF MUNCIE, INDIANA, ASSIGNOR OF ONE-THIRD TO FRED BARTLETT
AND ONE-THIRD TO THOMAS B. KOONS, OF MUNCIE, INDIANA.

SWITCH-OPERATING DEVICE.

No. 911,988.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed February 28, 1908. Serial No. 418,359.

To all whom it may concern:

Be it known that I, ALBERT LEWIS HUBER, a citizen of the United States, residing in Muncie, in the county of Delaware and State of Indiana, have invented a new and useful Improvement in Switch-Operating Devices, of which the following is a specification.

This invention is a switch operating device designed especially for use upon street railway cars, and the object of the device is to permit a switch to be set by a motorman from the car platform, so that the car will pass upon the switch or continue upon a straight course as may be desired.

The invention consists of the novel features of construction hereinafter described, pointed out in the claims and shown in the accompanying drawings, in which—

Figure 1 is a plan view of the complete device. Fig. 2 is a sectional side elevation showing the device complete. Fig. 3 is a transverse section through the car platform showing that portion of the device carried by the car, and taken on the line 3—3 of Fig. 1. Fig. 4 is a section taken transversely with respect to the track rails and showing in section a casing containing the operating parts arranged between the track rails, and taken on the line 4—4 of Fig. 1. Fig. 5 is a section on the line 5—5 of Fig. 1.

In these drawings 1 represents the main track rails and 2 the switch rails and between the main track rails and in advance of the switch is placed a T-shaped casing 3 in the head of which is arranged a slidable rack bar 4, said head being arranged at right angles to the track rails. The rack bar 4 is provided at each end with removable extensions 5 which project from opposite ends of the head of the casing 4 and which carry upon their upper faces adjacent their ends small rollers 6. In the casing and parallel to the track rails is rotatably mounted a shaft 7 which at one end carries a gear segment 8 which meshes with the rack bar 4 and at the opposite end the shaft 7 is provided with an upwardly extending arm 9 to which is pivotally connected a switch operating rod 10. In order to shift the bar 4 back and forth in the casing head, I provide upon the car oppositely arranged wedge-shaped shoes 11 adapted respectively to engage the rollers 6 at opposite ends of the casing head 4. These shoes are supported by rods 12 which rods

are provided with collars 13 and coil springs 14 surround the rods between the collars 13 and the guide brackets 20 and normally hold the said shoes in an elevated position. Upon the car platform are mounted foot pedals 15 to one end of which are pivotally connected rods 16 which also carry springs 17 similar in arrangement and construction to the springs 14 and the springs 16 aid the springs 14 in holding the parts in their normal positions. The lower end of each rod 16 is pivotally connected by a rod 18 to the upper end of one of the rods 12, the rods 18 being pivoted midway their ends in suitable brackets 19 carried by the under side of the car platform. I also provide suitable guide brackets 20 through the lower angle portion of which the rods 12 work.

The operation of the device is as follows:— If the switch is in the position shown in Fig. 1 and if the car is to continue upon the track 1 it will not be necessary for the motorman to make use of the switch operating device, but if the car is to pass upon the switch 2 the left hand foot pedal 15 is depressed, thus forcing down the shoe 11 as shown in Fig. 3, which shoe is flanged to fit the track rail. This shoe sliding along the track rail will engage the roller 6 adjacent said rail and the wedge-shaped face of the shoe 11 passing between the roller and the rail will shift the bar 4 to the right thus rocking the segment 8, giving a partial rotation to the shaft 7 and swinging the arm 9 to the right, drawing the switch operating rod 10 in the same direction and forcing the movable rail of the switch 2 into engagement with the right hand rail of the track 1, and at the same time drawing the movable rail upon the left hand side of the track 1 away from the left hand rail of the switch 2, thus giving the car a clear passage from track 1 to the switch 2. If upon the approach of the car the switch had been opened and it was desired to close the switch and continue upon the track 1 the operation would be reversed by depressing the left hand foot pedal 15.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a switch operating device, a rack bar slidably arranged transversely between track rails, rollers supported from the opposite ends of said rack bar, switch operating means operatively connected with said bar, wedge-

shaped shoes carried by the car and adapted to engage respectively the said rollers, and means for depressing either one of said shoes.

2. A device of the kind described comprising
5 ing a T-shaped casing arranged between track rails, a rack bar mounted in the casing head, extensions carried by said bar and projecting through the ends of said head, rollers carried by said extensions, a rotatable shaft
10 arranged in the casing and parallel with the track rails, a gear segment mounted on said shaft and in engagement with the rack bar, an arm mounted on said shaft, a switch operating rod pivotally connected to said arm,
15 wedge-shaped flanged shoes carried by the car, said shoes being adapted to slide upon the rails, the wedge-shaped faces of said shoes passing between the rails and the rollers, engaging the rollers, means for normally hold-

ing said shoes in an elevated position, and means for depressing either one of said shoes. 20

3. A switch operating device comprising a rack bar arranged between and at right angles to track rails, said bar being slidable longitudinally in either direction, a rotatable 25 shaft arranged parallel to said rails, a gear segment carried by said shaft and meshing with the rack bar, an arm carried by the rotatable shaft and extending upwardly, a switch operating rod pivotally connecting 30 said arm to a movable switch point, and means carried by the car for shifting the rack bar in either direction.

ALBERT LEWIS HUBER

Witnesses:

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